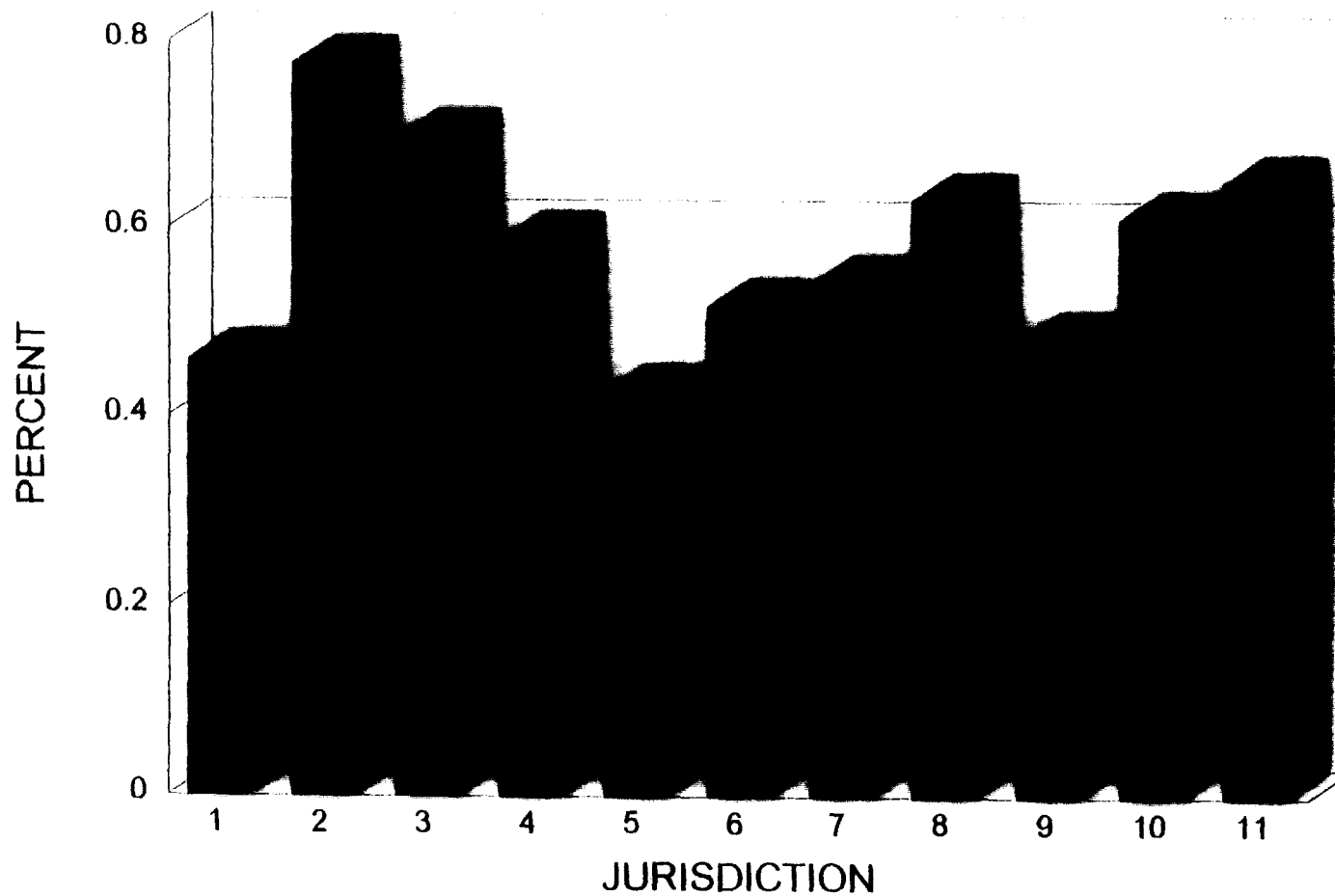


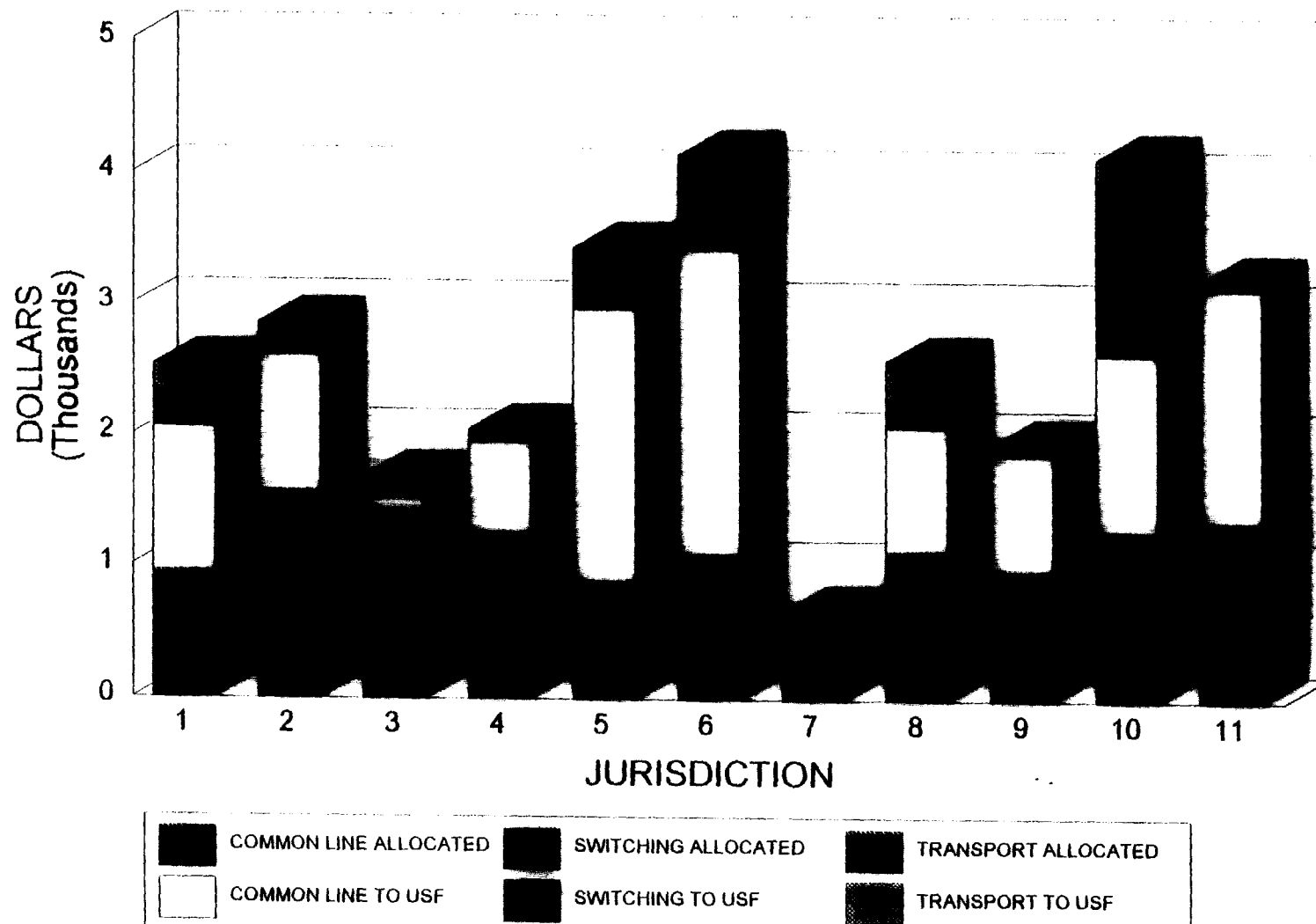
PERCENT OF NAT'L AVG ALLOCATION - 1994

COMPANY COMPARISON



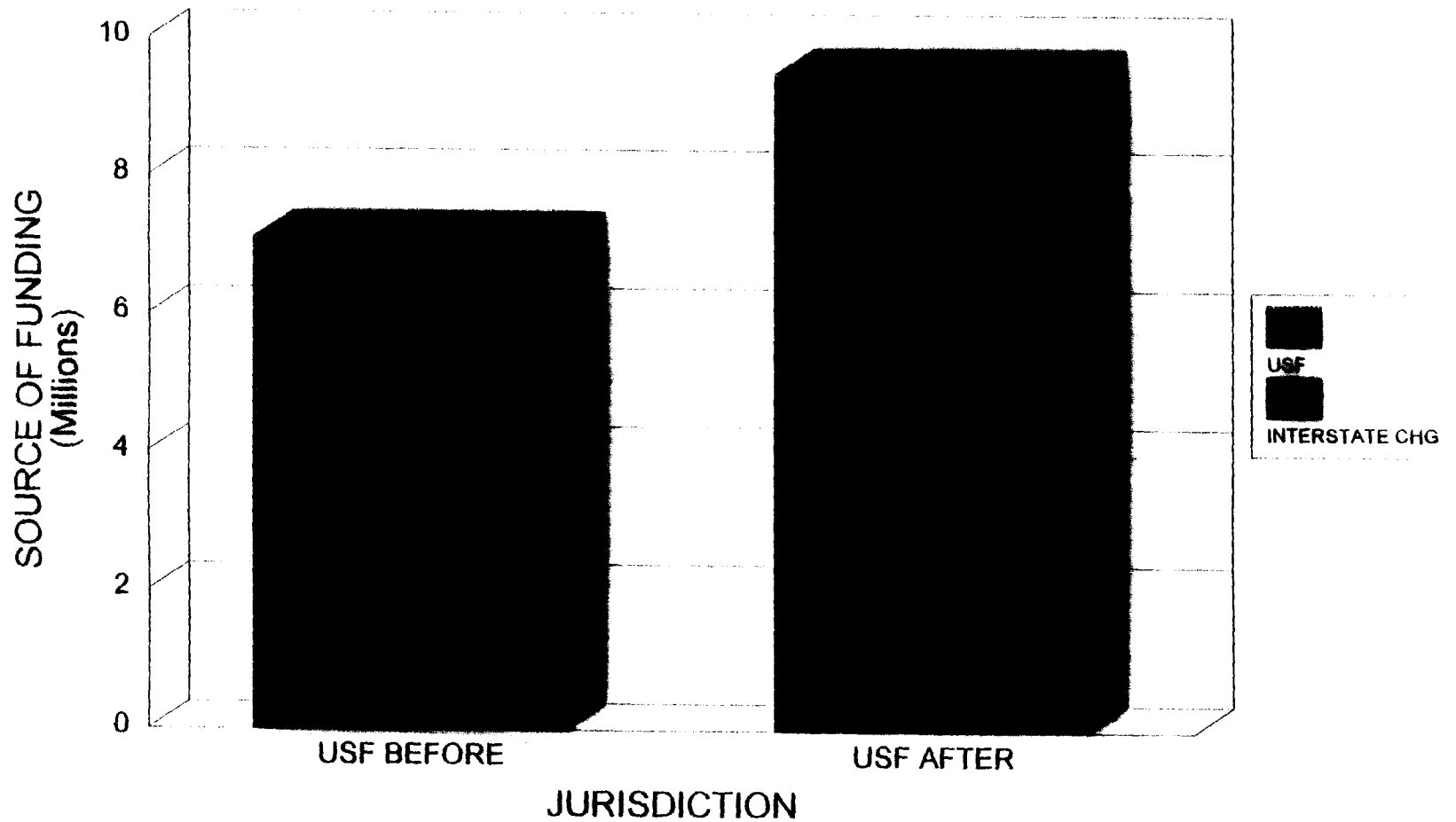
COM LINE, SWITCH & TRANS ALLOC - 1994

COMPANY COMPARISON



USF AMOUNTS BEFORE AND AFTER - 1994

USING ELEVEN COMPANIES



EXECUTIVE SUMMARY

Universal Service. The following White Paper presents a Plan that addresses and, we submit, solves a problem of Gordian proportions – how to reform Universal Service funding under the Telecommunications Act of 1996.

At the heart of the new Act is Congressional assurance of universally available and affordable telecommunications services to all Americans. Unlike the hoary 1934 Communications Act from which the concept was only implied or could be construed, Congress specifically defined Universal Service and charged federal and state regulators with the task of making it an enduring, elastic and economically viable concept. Universal Service support mechanisms under the new Act are to be explicit, rather than implicit.

In today's era of wide-open competition, rapidly evolving technologies and diverse service offerings, Congress mandated that Americans living in rural, insular and high cost areas reasonably have available to them the same services and at the same rates as in urban areas. Another major legislative objective was to promote access to advanced telecommunications for schools, health care and libraries. In sum, Congress charged the FCC with the responsibility of ensuring that there be no future information age class of telecommunication "have-nots" or "technopeasants." But, the burdens and complexities of this charge are formidable. It is this charge that the following Plan addresses.

Provisioning, providing, operating and maintaining telecommunications in rural, insular and high cost areas is radically different than urban telecommunications. For example in rural areas, subscriber density per mile of local loop plant are intrinsically low, and greater distances to be covered mean higher loop investment. Fewer lines connected to telephone switches yield higher cost per minute of switching. Similarly, the cost per circuit mile of longer network access transport facilities is higher. Finally, smaller and often lower rural incomes generate considerably lower average subscriber usage of loops.

These, and other undeniable factors, make rural, insular and high cost telephone area telecommunications investment much less desirable. Costs and risks are high and volumes and profit opportunity are low. Only with the implementation of Universal Service Funding policies under the 1934 Communications Act and Rural Electric Administration (now Rural Utility Service), did an adequate supply of capital become available to build state-of-the-art rural telephone systems.

Following several decades of competition in the long-distance, customer premises and other selected markets a new Telecommunications Act became law. A key objective of this law was "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality service for American telecommunications consumers and

encourage the rapid deployment of new telecommunications technologies," yet further Universal Service. Notably, however, the forces of competition and the responsibility to assure Universal Service are diametrically opposed.

Given this reality how do we develop a Universal Service Funding mechanism that promotes investment and operational efficiencies in rural, insular and high cost areas and still foster the Congressional goal of competition? What mechanism can reasonably satisfy the critics of the current funding mechanism, including perceptions of "goldplating"

The answer, we submit, lies in "The Per Minute of Use Universal Service Plan" as hereinafter described. Among the Plan's attributes are: (1) establishment of a level of competitive playing field, (2) a focus on customer requirements that increases rural levels of usage closer to nationwide averages, (3) the Plan creates an explicit and auditable, singular support mechanism (all other types of supports such as Long Term Support, DEM Weighting, RIC Charges are eliminated), (4) the Plan is based on usage per subscriber, rather than cost per loop, creating comparable long-distance access rates to urban areas, (5) the Plan balances investment incentives with that of operational efficiency and (6) the Plan balances access and local rates between jurisdictions.

In sum, the Plan provides effective economic incentives for telecommunications companies to keep rural, insular, and high cost America connected while maintaining nationwide average toll rates between companies and regions. Simply put, the Plan meets the Congressional mandated policies and goals of the Telecommunications Act of 1996.

**WHITE PAPER
ON
THE PER MINUTE OF USE UNIVERSAL SERVICE PLAN**

THE PROBLEM AND THE FACTS

1. **High Loop Costs** - Telephone service provided in rural areas are typically characterized by low subscriber density per mile of loop investment as well as greater distances, therefore they have high loop investments on a per subscriber basis.
2. **High Switching and Access Costs** - Telephone switching costs in rural areas with small or medium sized exchanges have the similar problem of low usage per dollar of investment because the cost or price of the basic switch is not based on the number of subscribers switched. Therefore, because of the fewer access lines there are fewer access minutes for switching purposes and higher costs per minute for switching.
3. **High Transport Costs** - Transport facilities for telephone service in rural areas with small or medium sized exchanges are also traffic sensitive; however, due to distance and sizing considerations, the cost per circuit mile is often higher than facilities in more urban areas. Additionally, lower subscriber density and lower total usage means that the facility installed is not fully utilized. Therefore, the cost per minute for transport is much higher in rural areas.
4. **Low Average Usage Per Loop** - For a variety of reasons including low populations in local calling areas (even with Extend Area Service) and in many cases lower incomes along with a charge for nearly every call, total usage per access line in rural areas is much lower than in urban areas, in most cases only 50% - 70% of the nationwide average usage per loop. Therefore, while the Universal Service Funding is based on a cost per loop only, the cost per minute of use in rural areas is nearly double the cost per minute on a nationwide average basis (See NECA rates compared to the RBOC's rates).
5. **Capitalization Difficulties** - Because of the problems listed in items 1 - 4 above, traditional investors are reluctant to invest the money required to provide telephone service in rural areas. This can be seen by the fact that the Bell Operating Companies do not serve large areas of rural areas unless they are required to do so. This was left to Cooperatives and specialized investors with the help of RUS (formerly REA) funding. The ability to attract investors to provide service in rural areas did not become feasible until implementation of the universal service public policy dictated in the 1934 Communications Act.

Mechanisms such as the Subscriber Plant Factor, Weighted Dial Equipment Minutes and the Universal Service Fund provided the necessary revenues to promote universal service.

The Telecommunication Act of 1996 became law on February 8, 1996. The new law was passed "To promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies". At the same time explicit Universal Service principles were codified into law in Section 254 of the Act. These provisions provided for:

- a) **QUALITY AND RATES** - Quality services should be available at just, reasonable, and affordable rates.
- b) **ACCESS TO ADVANCED SERVICES** - Access to advanced telecommunications and information services should be provided in all regions of the Nation.
- c) **ACCESS IN RURAL AND HIGH COST AREAS** - Consumers in all regions of the Nation, including low-income consumers and those in rural, insular and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas, and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.
- d) **EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS** - All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.
- e) **SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS** - There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.
- f) **ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES** - Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services as described in subsection (h).
- g) **ADDITIONAL PRINCIPLES** - Such other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience and necessity and are consistent with the Act.

THE QUESTION FOR RESOLUTION

Given the inherent problems of rural telephone service, the requirements of the Telecommunications Act of 1996 and the fact that the return on investment in rural areas is much

lower than the return on the same investment in urban areas, how do we develop a Universal Service Funding mechanism that promotes investment in rural areas to maintain Universal Service and yet keeps the underlying costs low enough so that competition can still take place? Furthermore, given the recurrence of allegations of recent dissertations on "goldplating" and inefficiency, How do we devise a system that promotes investment in rural areas to maintain Universal Service and ensure operational efficiency.

THE PLAN AND THE SOLUTION

Establish a High Cost Fund for Low Usage/Density Common Line, Switching and Transport Facilities.

In analyzing the underlying problems facing small rural telephone companies, focus was given to several key problems. First, rural access rates, as mentioned above, are extremely high in both the interstate and intrastate jurisdictions. Second, the emerging trend toward expanded local calling areas only adds to the burden which must be borne by the local ratepayer. Finally, as the carrier of last resort and because of the existing presubscribed line basis for funding, AT&T not only must pay the higher rural access rates, it must also pay for universal service on the basis of lines which, in many cases, provide AT&T with no toll revenues (some rural subscriber use no toll). This places AT&T at a significant disadvantage on the competitive playing field.

With these thoughts in mind, any Workable Universal Service Fund Plan developed would have to have the following attributes to satisfy the industry, regulators, the IXC's and others.

1. The plan would have to establish a level playing field that will promote and foster competition in rural areas.
2. It should be developed to focus on the customer and the customer's requirements such as Extended Area Service or Flat Rate Calling Plans in order to increase rural usage to a point closer to the nationwide average
3. It would have to make all types of support explicit, in order to provide for competition, to provide for consumer rates that are comparable to urban rates and to support state and nation-wide average toll rates, all of which are required by the 1996 Telecommunications Act.
4. It would have to be based on the usage per subscriber, rather than the cost per loop in order to provide for access rates in rural areas that are comparable to access rates in urban areas.
5. It would have to balance the incentive for investment with the incentive for efficiency.
6. It would need to have an incentive for interexchange carriers to promote usage in rural

areas.

7. It would have to be usage based in order to provide for access and local rates that are comparable between jurisdictions.

THE PER MINUTE OF USE UNIVERSAL SERVICE PLAN meets all of the above requirements as follows:

1. The plan is cost based in order to provide and incentive for investment in Universal Service infrastructure. It allocates General and Support Facilities and all expenses on gross Common Line, Switching and Transport investment, similar to today's cost studies with some major changes. The incentive for efficiency is provided for by basing the allocation of expenses on a per dollar of investment in Common Line, Switching and Transport. (Generally if a company is going to be inefficient it will do so in the area of General and Support Facilities and Corporate and Administration Expense. These costs would be allocated on the Big Three Investment (Central Office Equipment, Information Origination and Termination Equipment and Cable and Wire Facilities) factors and the Big Three Expense (Plant Specific, Plant Non Specific and Customer Service) factors. Any excesses in these expenses would show up in higher than average local rates and higher than average access rates.)
2. This plan is usage sensitive in that the higher the usage per access line the lower the dependency on a Universal Service Funding Mechanism.
3. This plan eliminates all other types of support such as Long Term Support, DEM Weighting, RIC Charges and etc. except for Lifeline and Link-Up.
4. This plan helps maintain Nationwide Average Toll Rates between companies and regions.

This plan would apply to Rate of Return regulated companies and all companies utilizing the current Jurisdictional Separations, Part 36 rules and could be adapted to rural exchange areas of companies electing price caps. The Universal Service Fund revenue requirement would be calculated on a current basis, along with the cost study and would have to be trued up as part of the cost study. Funding for the Universal Service Fund would be similar to the funding for the Telephone Relay System. From a separations standpoint there are certain changes that need to be made. These are:

1. Add an additional "jurisdiction" column to the cost separation output for the Universal Service revenue requirement in addition to the current Interstate, Intrastate and Local Jurisdictions. This category would include the amount over the usage adjusted national average investment and expenses.
2. Company switching gross investment less than or equal to the national average

gross investment per loop (or some percentage thereof) adjusted for usage would be allocated jurisdictionally based on Switched Minutes of Use (SMOU). SMOU uses the same basic data as Subscriber Line Usage (SLU) except that it uses only one switching minute of use for each local minute as compared to SLU that uses two subscriber line minutes for each local minute. Switching gross investment greater than the national average gross investment per loop (or some percentage thereof) adjusted for usage would be directly assigned to the Universal Service Jurisdiction.

3. Company Common Line gross investment less than or equal to the national average gross investment per loop (or some percentage thereof) adjusted for usage would be allocated on the various jurisdictions based on SLU. Common Line gross investment greater than the national average gross investment per loop (or some percentage thereof) adjusted for usage would be directly assigned to the Universal Service Jurisdiction.
4. Transport gross investment would include , Host/Remote , Exchange Trunk, and Interexchange Transport Facilities. Company Transport gross investment less than or equal to the national average gross investment per loop (or some percentage thereof) adjusted for usage would be allocated to the various jurisdictions based on actual usage by investment type. Since transport has three different types of investment, the usage in the cost study (for allocation on usage) would be proportional to the total (i.e. Host/Remote C&WF is 43% of total transport facilities, then Host/Remote C&WF allocated on actual usage in the cost study would be 43% of the National average gross investment per loop. Transport gross investment greater than the national average gross investment per loop (or some percentage thereof) adjusted for usage would be directly assigned to the Universal Service Jurisdiction.
5. Wideband Facilities (T1 and greater for Special Access) investment less than or equal to the national average gross investment per loop would be allocated to the various jurisdictions base on actual usage. Wideband Facilities gross investment greater than the national average gross investment per loop would be directly assigned to the Universal Service Jurisdiction.
6. The Service Order Processing Charge would be allocated to all jurisdictions on the basis of SLU rather than being directly allocated to the Local Jurisdiction. The Service Order Processing Charge benefits all jurisdictions for new services and terminations of current service. Therefore, it is inappropriate to allocate the full cost of Service Order Processing to local. Further, cost per minute amounts are skewed to local if Service Order Processing is allocated 100% to local.

Reserves and like accounts and all expenses would continue to be allocated to the various

jurisdictions including Universal Service on the same basis (gross investment) and in the same manner as they are today.

The purpose of the usage adjustment is to reflect the average value associated with each subscriber line on a nationwide basis to the value associated on a company wide basis. Subscribers using more minutes of use than the nationwide average have already placed a greater value on their telephone and would be willing to pay more for the facility. A higher average usage per access line would generally reflect a larger calling area or some type of plan for greater calling area. The usage adjustment will help keep the cost per minute of use somewhat similar on a nationwide basis and encourage more usage or larger calling areas, even if local rates have to rise to include a larger calling area. Currently larger calling areas in rural areas can become too expensive for the subscriber due to the high costs allocated from the intrastate jurisdiction, thereby leaving switching plant in rural areas under utilized. Getting more usage per subscriber, will bring costs per unit down in rural areas and enhance the value of telephone service on a national scale.

PUBLIC INTEREST

ADVANTAGES OF THE PLAN

1. This plan takes into account the usage per access line in developing the high cost fund payments. This would allow for local rate levels to be based on usage (even though they would be flat rated). This would also promote more parity in local rates between similar telephone companies and between urban and rural areas.
2. Access rates are leveled to approximately \$.03 - \$.06 per minute among carriers and between jurisdictions and makes the transport access charges traffic insensitive. This should provide an incentive to promote competition in the rural toll market because the cost for urban or rural access charges per minute would be nearly the same.
3. Usage stimulation on a per access line bases decreases the amount taken from the Universal Service Fund and would make all carriers (Local and Interexchange) more responsible for Universal Service. Though the use of flat rate calling plans and expanded calling areas the usage per access line would increase, the Universal Service Fund requirement would decrease.
4. This plan makes support explicit and eliminates all other types of implicit support including Long Term Support, DEM Weighting, RIC Charges and etc. except for Lifeline and Link-Up.
5. Universal Service Funding would be on a current basis. Therefore small companies with big expansion projects would not have to wait two years to

receive a return of expenses and a return on the portion of their investment that is allocated to USF. The plan would eliminate the need for the 5% Limitation on the Phasedown of SPF.

6. This plan maintains an incentive for telephone companies to keep rural America connected.
7. This plan helps maintain Nationwide Average Toll Rates among companies and regions.
8. This plan could be adapted to all rural areas, even those owned by large LECs. The large LEC's could break out their costs based on investment in urban (exchanges that are included in or touch any Metropolitan Statistical Areas - MSA) exchanges and rural (non-MSA) exchanges on the same basis as Part 36 Jurisdictional Separations Procedures. The USF funding for the rural exchanges could be calculated in the same manner as the funding for non-price cap companies. There would be no Universal Service Funding for urban areas, only Lifeline and Link-Up funding calculated using a different formula. This plan would eliminate much of the implicit Universal Service Funding found today between urban and rural areas of the large LECs.

The following color graphs, based on 1994 data, illustrate the application and effect of the Per Minute of Use Universal Service Plan.

Notes and Comments on the Graphs

1. The allocation of loop cost to special access is based on the usage adjusted common line gross investment. It is reasonable to allocate special access on an unadjusted basis or on the national average cost per loop. Special Access on an adjusted basis would only promote bypass because the usage adjusted special access rate would be lower than the national average cost per special access line.
2. Graph ITCs Inc. GRB 7, shows companies 2,3 and 11 with very high local rates based on revenue requirement. It should be noted that all three of the companies had transport gross investment allocated to the common line because of expanded calling areas (therefore higher local usage per loop) and because transport gross investment was below the national average adjusted for usage. Normally, no transport investment is included in the local jurisdiction except for Exchange Trunk and some Host/Remote Facilities.
3. The gross investment for Tandem Switching was included with Local Switching. Tandem Switching could also be included with transport gross investment, as an

alternative, for calculation of the USF allocations.

4. Because of the immaterial nature of Information Origination Termination Equipment to Central Office and Cable and Wire Facilities Equipment, Information Origination and Termination Equipment was not included in the calculations. Information Origination Termination Equipment are those required by the State Commission's as minimum service requirements. This plan could be easily modified to include payphones required by the State Commissions for the provision of minimum service to rural areas.
 - a. Graph ITCs Inc. - GRB 1 only includes the four major categories (The Big Three Expenses and General and Admin Expense) of expenses shown. It does not include taxes or return.
 - b. Graphs ITCs Inc. - GRB 2 - 8 include all expenses including taxes and return.
 - c. Graph ITCs Inc. - GRB 10 is the allocation of gross investment.
 - d. Graph ITCs Inc. - GRB 8 is average local rates per loop prior to any reductions for other local revenues which may average approximately \$5.00 per loop.
 - e. In addition to the transport problems noted for companies 2,3 and 11, companies 2 and 11 have high expenses per loop and have taken or are taking measures to remedy this situation. All three companies have high usage per access lines of approximately 80% or more of the nationwide average usage per access line. All three companies have large local calling areas (therefore higher local rates) and little remaining intrastate intraLATA calling.
 - f. Graph ITCs Inc. - GRB 12 is the expenses per dollar invested in common line, switching and transport only.

Appendix I

CALCULATION OF THE PER MINUTE OF USE UNIVERSAL SERVICE PLAN

The process of developing the adjusted gross investment to be allocated to the cost study and to the Universal Service Fund is shown in this appendix. NECA would develop the nationwide average gross investment per access line for Common Line, Switching and Transport Facilities. These calculations would be performed by NECA, who would have access to this information on an annual basis.

Step 1 - Develop the National Average Cost per Loop by Account and Cost Study Category.

| | | Total Nat'l Investment | Total Loops | Avg Cost per Loop (Incl. Spec Acc) |
|-------|---------------------|------------------------|-------------|---------------------------------------|
| Nat'l | Acct 2210 | \$ 56,830,864,000 | 140,745,396 | \$ 403.78 |
| Nat'l | Acct 2230 Cat 4.13 | \$ 18,890,878,000 | 143,426,250 | \$ 131.71 |
| Nat'l | Acct 2410 Cat 1.3 | \$109,076,807,000 | 143,426,250 | \$ 760.51 |
| Nat'l | Acct 2230 Transport | \$ 26,770,572,000 | 143,426,250 | \$ 186.65 |
| Nat'l | Acct 2410 Transport | \$ 13,134,741,000 | 143,426,250 | \$ 91.58 |
| Total | | | | \$1,574.23 |

(Source: NECA 1993 Information)

(Acct 2210 includes only Message Loops, Other Loops include Special Access)

Step 2 - Each Company would develop average costs per access line for Common Line, Switching and Transport Facilities.

| | | | | |
|-------|---------------------|--------------|-------|------------|
| Co A | Acct 2210 | \$ 1,167,137 | 2,533 | \$ 460.77 |
| Co A | Acct 2230 Cat 4.13 | \$ 93,397 | 2,567 | \$ 36.38 |
| Co A | Acct 2410 Cat 1.3 | \$ 3,543,764 | 2,567 | \$1,380.51 |
| Co A | Acct 2230 Transport | \$ 117,094 | 2,567 | \$ 45.61 |
| Co A | Acct 2410 Transport | \$ 153,421 | 2,567 | \$ 59.77 |
| Total | | \$ 5,074,813 | | \$1,983.04 |
| | | | | |
| Co B | Acct 2210 | \$ 329,799 | 650 | \$ 507.38 |
| Co B | Acct 2230 Cat 4.13 | \$ 19,129 | 662 | \$ 28.90 |
| Co B | Acct 2410 Cat 1.3 | \$ 681,896 | 662 | \$1,030.05 |
| Co B | Acct 2230 Transport | \$ 111,921 | 662 | \$ 169.06 |
| Co B | Acct 2410 Transport | \$ 37,231 | 662 | \$ 56.24 |
| Total | | 1,179,976 | | \$1,791.63 |

Step 3 - Develop the national average usage per access line for switching and circuit equipment using Switched Minutes of Use(SMOU) for switching and Subscriber Line Usage (SLU) minutes of use for Common Line Equipment and appropriate usage factors for other equipment. These calculations would be performed by NECA, who would have access to this information.

| | <u>SLU Minutes of Use</u> | | Total Loops Avg Ann Usage Per National Loop |
|------------|---------------------------|-------------|--|
| Interstate | 386,619,574,000 | | |
| Intrastate | 317,642,293,000 | | |
| Local | 1,949,477,731,000 | | |
| Total | 2,653,739,598,000 | 140,745,396 | 18,855 |

| | <u>SMOU Minutes of Use</u> | | Total Loops Avg Ann Usage Per National Loop |
|------------|----------------------------|-------------|--|
| Interstate | 386,619,574,000 | | |
| Intrastate | 317,642,293,000 | | |
| Local | 974,738,865,500 | | |
| Total | 1,679,000,732,500 | 140,745,396 | 11,929 |

| | <u>Transport Minutes of Use</u> | | Total Loops Avg Ann Usage Per National Loop |
|------------|---------------------------------|-------------|--|
| Interstate | 386,619,574,000 | | |
| Intrastate | 317,642,293,000 | | |
| Local | 584,843,319,300 | | |
| Total | 1,289,105,186,300 | 140,745,396 | 9,159 |

(NOTE: Local Transport Minutes - Extended Area Service - are assumed to be 60% of SMOU or 30% of SLU minutes of use.)

Step 4 - First, the average SLU and SMOU usage per company access line is developed on an individual company basis. Secondly, develop the company's percentage of average usage per subscriber to the nationwide average usage per subscriber. The percent developed will be used to adjust the company cost per loop for usage.

| | SLU | Loops | Avg Ann Usage | Percent |
|------|------------|-------|---------------|---------|
| Co A | 30,627,793 | 2533 | 12,092 | 64 % |
| Co B | 8,406,186 | 650 | 12,933 | 69 % |

| | SMOU | Loops | Avg Ann Usage | Percent |
|------|------------|-------|---------------|---------|
| Co A | 24,436,528 | 2533 | 9,647 | 81 % |
| Co B | 6,683,104 | 650 | 10,282 | 86 % |

| | Transport | Loops | Avg Ann Usage | Percent |
|------|------------|-------|---------------|---------|
| Co A | 20,532,480 | 2533 | 8,105 | 88 % |
| Co B | 5,062,644 | 650 | 7,789 | 85 % |

Assuming that no universal service funding allocations will be provided for companies with an average, usage adjusted cost per loop less than 100% of the national average cost per loop, the following is the usage adjustment

Calculation of Universal Service Funding Allocations Amounts for Co A:

Switching - National Average Switch Investment per Loop allocated to the Cost Study [$\$403.78 * 1.00$ (High Cost Fund Differential) $* .81$ (SMOU Adj) = $\$327.06$ (Adj National Average Investment for Switching per loop)]. Company A Average Switch Investment per Loop [$\$460.77$ (Company A Avg) - $\$327.06$] = $\$133.71$ (Company Gross Switch Investment to High Cost Fund)

Common Line - National Average Subscriber Investment per Loop allocated to the Cost Study [$\$892.22$ (National Avg for Subscriber Carrier & Cable) $* 1.00$ (High Cost Fund Differential) $* .64$ (SLU Adj) = $\$571.02$ (Adj National Average Investment for Subscriber Cable and Carrier per Loop)]. Company A Gross Investment in Subscriber Cable and Carrier per Loop [$\$1,416.89$ (Company A Avg) - $\$571.02$ (Adj Nat'l Avg) = $\$845.87$ (Company Gross Investment in Subscriber Cable and Carrier per Loop Allocation to Universal Service Fund), [$\$845.87 * .036$ (Cat 4.13 to Total CL) = $\$30.45$ (Universal Service Fund Allocation Per MTS Loop to Cat 4.13)], [$\$845.87 * .964$ (Cat 1 C&WF to Total CL) = $\$815.42$ (Universal Service Fund Allocation Per MTS Loop of Cat 1 C&WF)].

Transport - National Average Transport Investment per Loop allocated to the Cost Study [$\$ 278.23$ (Nat'l Avg Cost for Transport Carrier & Cable) * 1.00 (High Cost Fund Differential) * .88 (SLU Adj) = $\$ 244.84$ (Adj Nat'l Avg Investment in Transport per Loop)]. Company A Gross Investment in Transport Cable and Carrier - [$\$ 105.38$ (Company A Avg) - $\$ 139.46$ (Adj Nat'l Avg) = $-\$ 0.00$ (Company Gross Loop Allocation to Universal Service Fund)]. NOTE: Because the Transport Gross Investment per Loop allocated to Universal Service Fund is negative, the Subscriber Gross Investment per Loop allocated to the Cost Study would be increased by $\$ 139.46$ and the Subscriber Gross Investment per Loop allocated to the Universal Service Fund would be decreased by $\$ 139.46$

| RECAP FOR COMPANY A | | | | |
|------------------------------------|---------------|-------|--------------|----------------|
| | Cost Per Loop | Loops | Cost Study | Univ Serv Fund |
| Switching | \$ 327.06 | 2,533 | \$ 828,443 | |
| | \$ 133.71 | 2,533 | | \$ 338,687 |
| Common Line | \$ 571.02 | 2,567 | \$ 1,465,808 | |
| | \$ 845.87 | 2,567 | | \$2,171,348 |
| Transport | \$ 105.38 | 2,567 | \$ 270,510 | |
| | \$ -0.00 | 2,567 | | \$ -0- |
| Adj Com Lin | \$ 139.46 | 2,567 | \$ 357,994 | |
| Adj Com Lin | \$ -139.46 | 2,567 | | -\$ 357,994 |
| TOTAL (Difference due to rounding) | | | \$ 2,922,755 | \$2,152,041 |

Calculation of Universal Service Funding Allocations Amounts for Co B:

Switching - National Average Switch Investment per Loop allocated to the Cost Study [$\$ 403.78$ * 1.00 (High Cost Fund Differential) * .86 (SMOU Adj) = $\$ 347.25$ (Adj National Average Investment for Switching per loop)]. Company B Average Switch Investment per Loop [$\$ 507.38$ (Company A Avg) - $\$ 347.25$] = $\$ 160.13$ (Company Gross Switch Investment to High Cost Fund)

Common Line - National Average Subscriber Investment per Loop allocated to the Cost Study [$\$892.22$ (National Avg for Subscriber Carrier & Cable) * 1.00 (High Cost Fund Differential) * .69 (SLU Adj) = $\$ 615.63$ (Adj National Average Investment for Subscriber Cable and Carrier per Loop)]. Company B Gross Investment in Subscriber Cable and Carrier per Loop [$\$1,058.95$ (Company B Avg) - $\$615.63$ (Adj Nat'l Avg) = $\$443.32$ (Company Gross Investment in Subscriber Cable and Carrier per Loop Allocation to Universal Service Fund), [$\$443.32$ * .027 (Cat 4.13 to Total CL) = $\$ 11.96$ (Universal Service Fund Allocation Per MTS Loop to Cat 4.13)], [$\$443.32$ * .973 (Cat 1 C&WF to Total CL) = $\$431.36$ (Universal Service Fund Allocation Per MTS Loop of Cat 1 C&WF)].

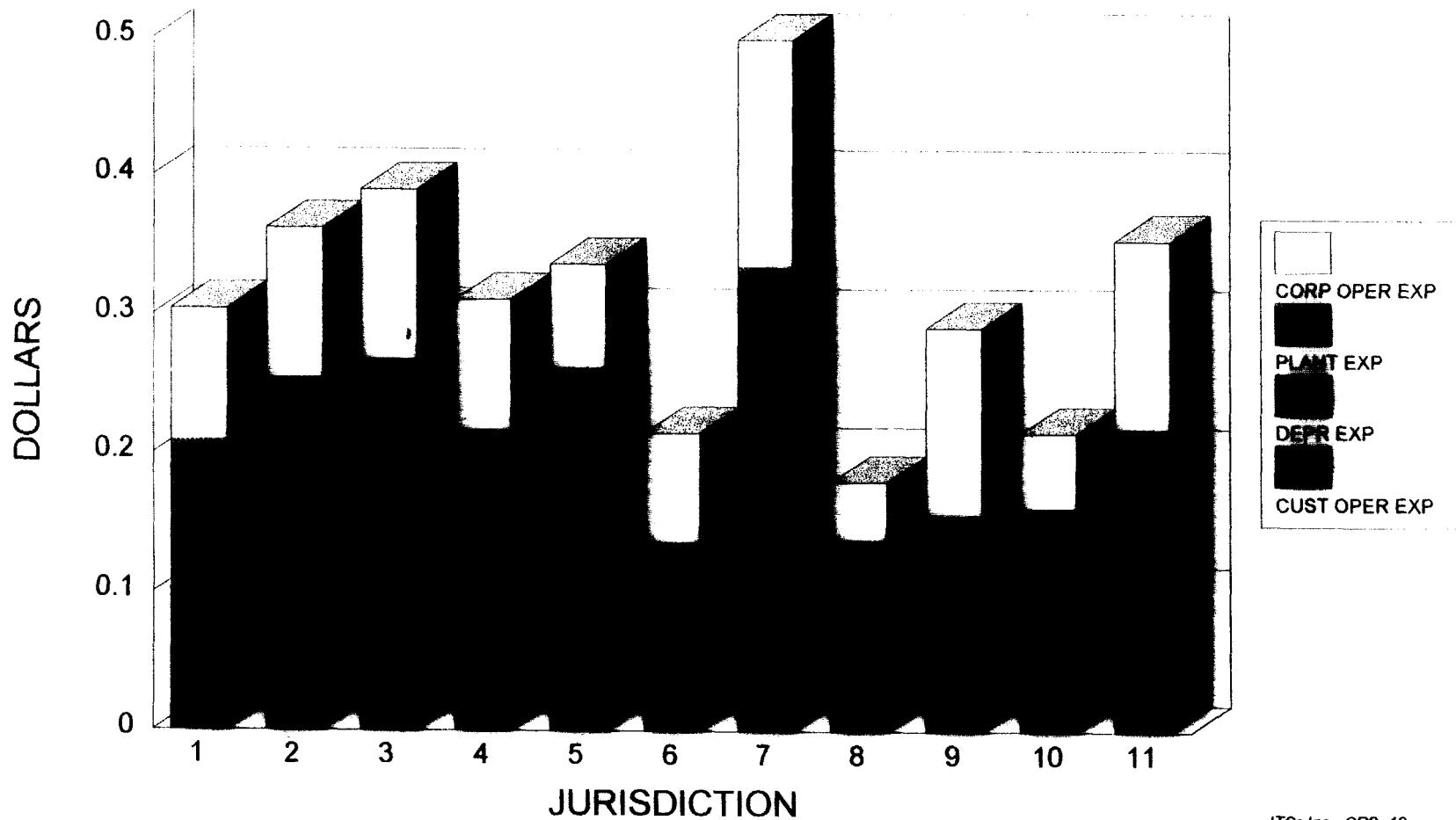
Transport - National Average Transport Investment per Loop allocated to the Cost Study [$\$ 278.23$ (Nat'l Avg Cost for Transport Carrier & Cable) * 1.00 (High Cost Fund Differential) * .85 (SLU Adj) = $\$ 236.50$ (Adj Nat'l Avg Investment in Transport per Loop)]. Company B Gross Investment in Transport Cable and Carrier - [$\$ 225.30$ (Company B Avg) - $\$ 236.50$ (Adj Nat'l Avg) = $-\$ 0.00$ (Company Gross Loop Allocation to Universal Service Fund)]. NOTE: Because the Transport Gross Investment per Loop allocated to Universal Service Fund is negative, the Subscriber Gross Investment per Loop allocated to the Cost Study would be increased by $\$ 11.20$ and the Subscriber Gross Investment per Loop allocated to the Universal Service Fund would be decreased by $\$ 11.20$

RECAP FOR COMPANY B

| | Cost Per Loop | Loops | Cost Study | Univ Serv Fund |
|------------------------------------|---------------|-------|------------|----------------|
| Switching | \$ 347.25 | 650 | \$ 225,713 | |
| | \$ 160.13 | 650 | | \$ 104,084 |
| Common Line | \$ 615.63 | 662 | \$ 407,547 | |
| | \$ 443.32 | 662 | | \$ 293,478 |
| Transport | \$ 225.30 | 662 | \$ 149,149 | |
| | \$ -0.00 | 662 | | \$ -0- |
| Adj Com Lin | \$ 11.20 | 662 | \$ 7,414 | |
| Adj Com Lin | \$ - 11.20 | 662 | | -\$ 7,414 |
| TOTAL (Difference due to rounding) | | | \$ 797,237 | \$ 390,148 |

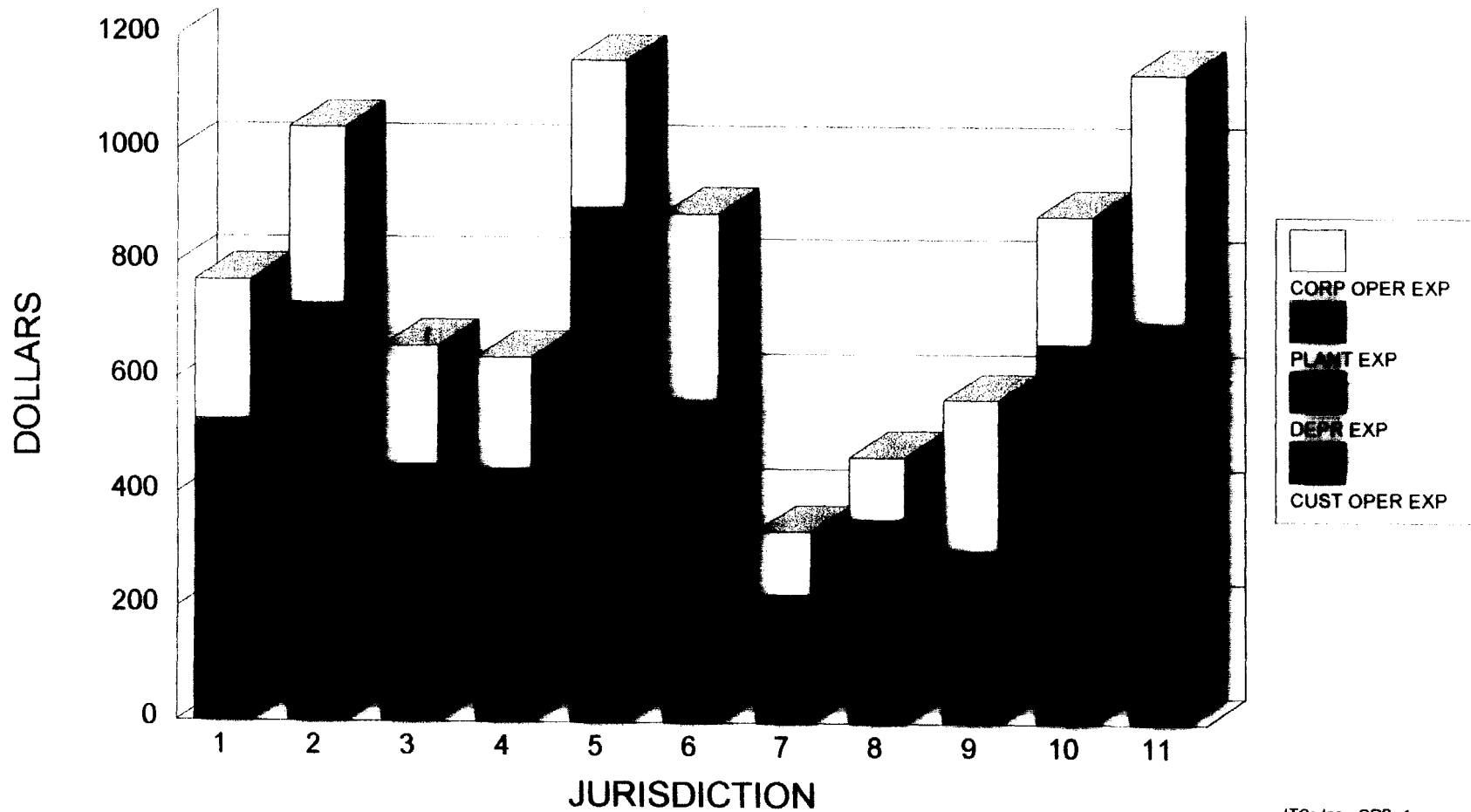
EXPENSES PER DOLLAR INVESTED - 1994

COMPANY COMPARISON



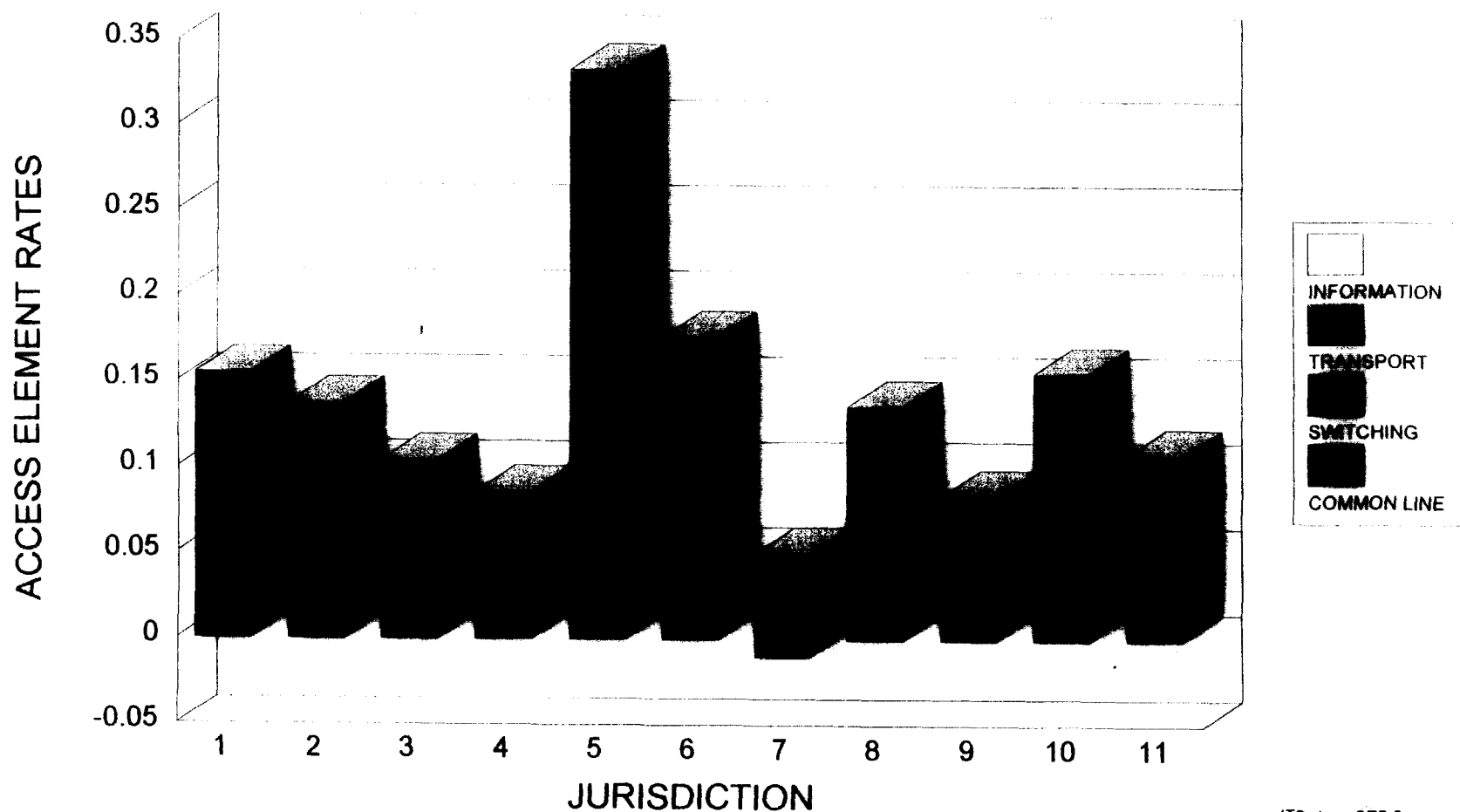
EXPENSES PER LOOP - 1994

COMPANY COMPARISON

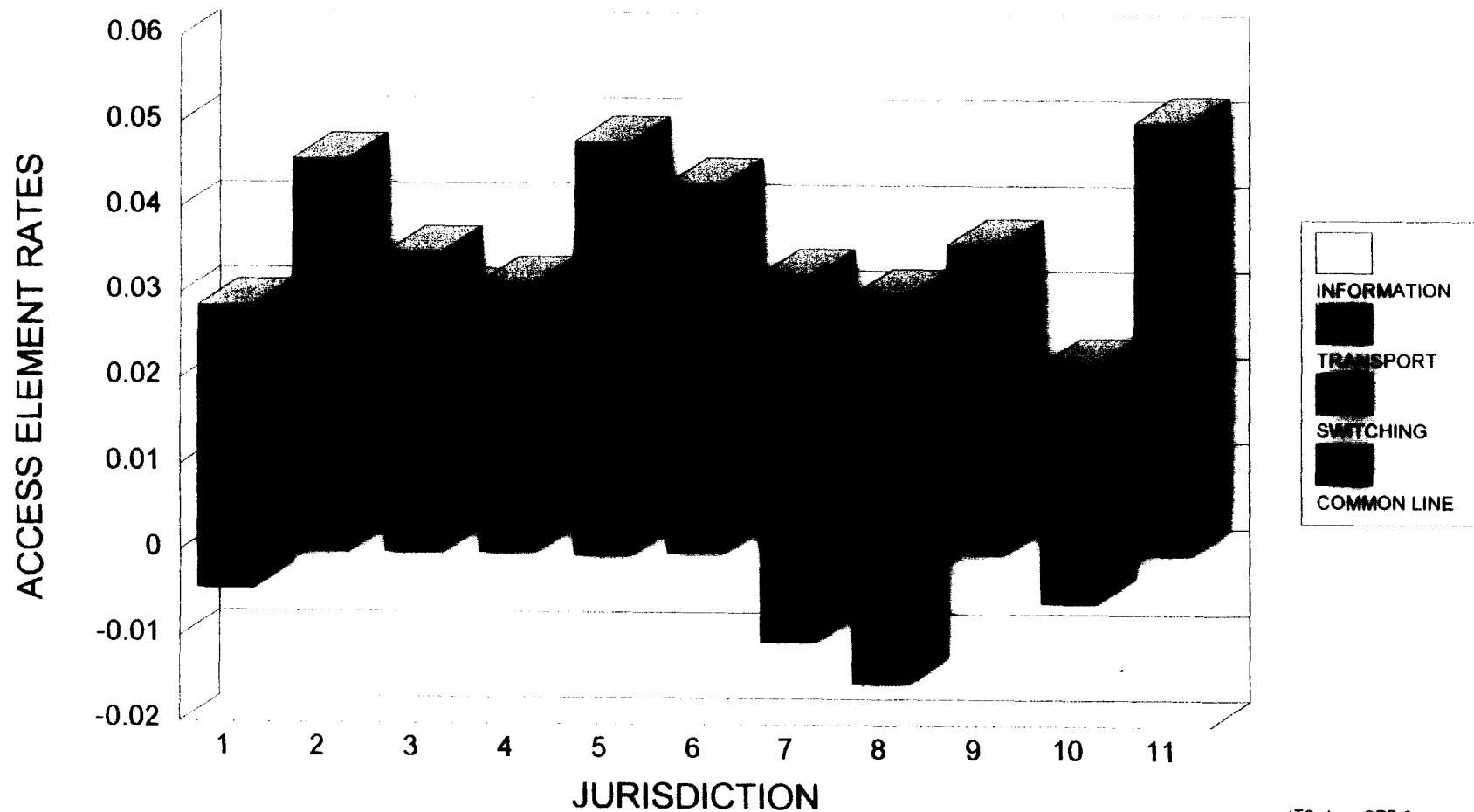


INTERSTATE ACCESS RATES - 1994 -BEFORE

COMPANY COMPARISON

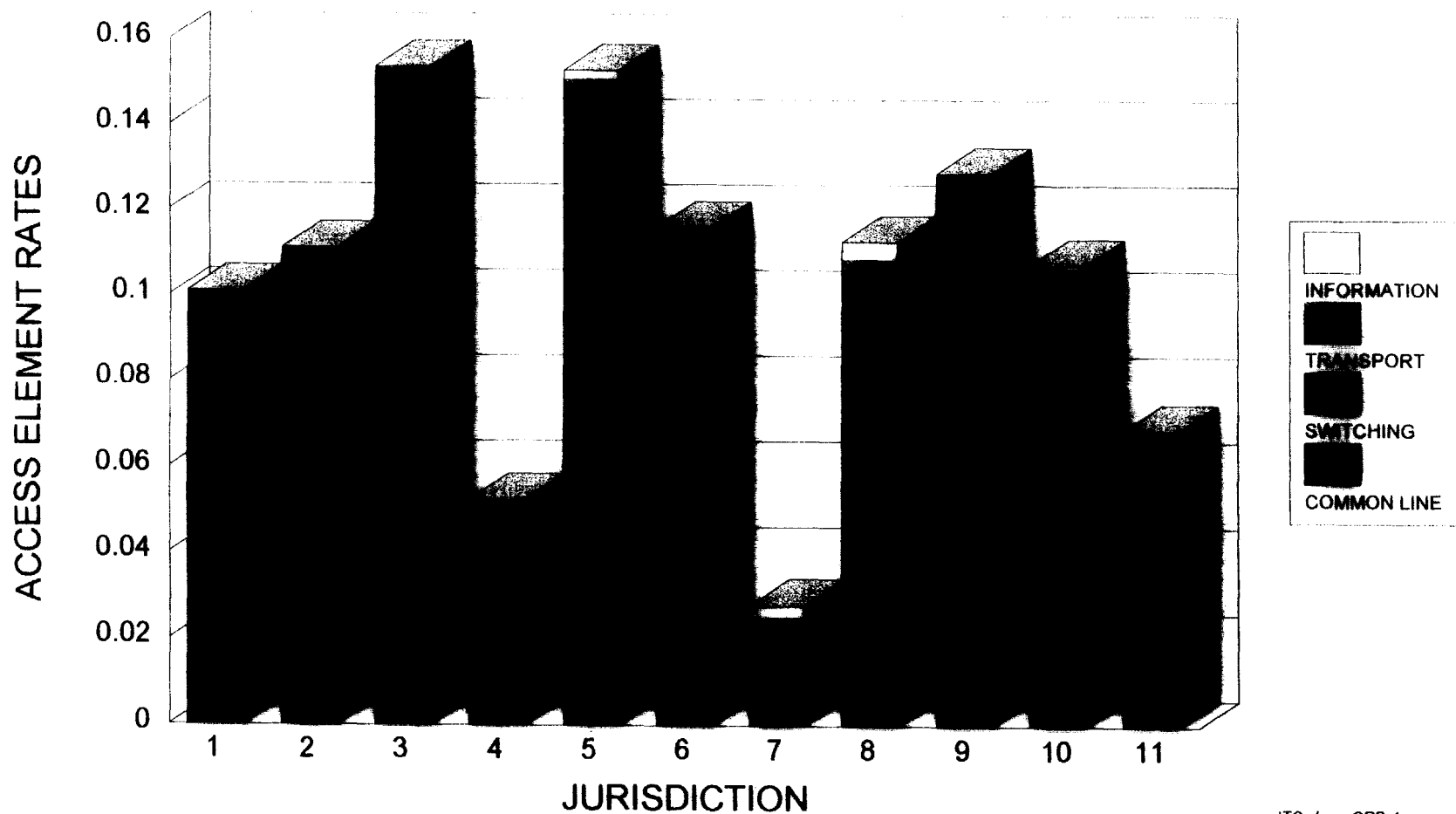


INTERSTATE ACCESS RATES - 1994 - AFTER COMPANY COMPARISON



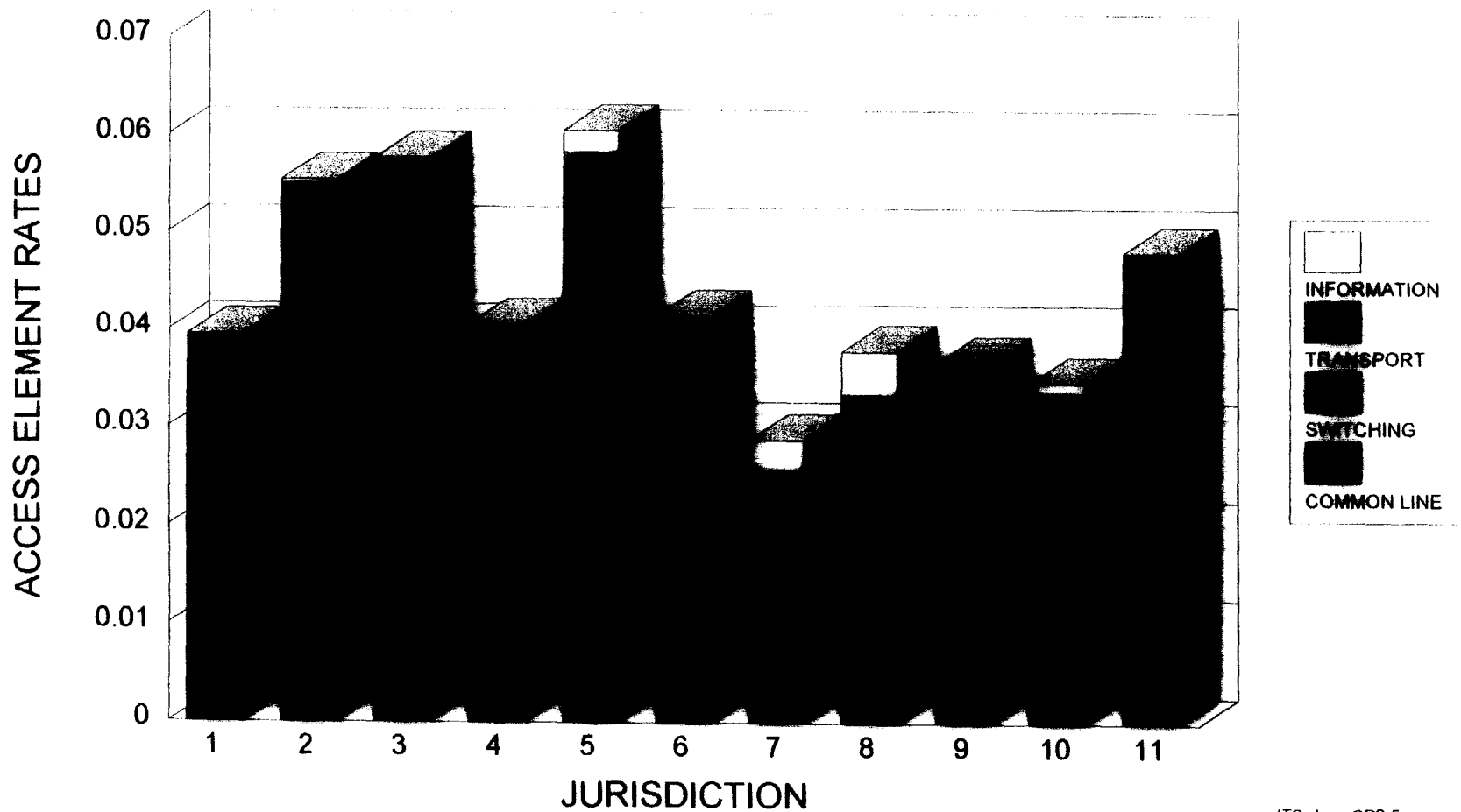
INTRASTATE ACCESS RATES - 1994 -BEFORE

COMPANY COMPARISON



INTRASTATE ACCESS RATES - 1994 - AFTER

COMPANY COMPARISON



LOCAL ACCESS RATES - 1994 - BEFORE COMPANY COMPARISON

